

WellStack Equips Healthcare Orgs with Rich Insights to Improve Care Quality and Cost

Powered by Snowflake, WellStack's data analytics platform helps healthcare organizations understand patients, accelerate data integration, increase data-driven decision-making and reduce costs while eliminating risk.

Snowflake Workloads Used

- | Data Engineering
- | Data Lake
- | Data Warehouse
- | Applications
- | Collaboration

Industry:

Healthcare Technology

Location:

Madison, Wisconsin

Key Results

70% Improvement in data processing time

90% Reduction in metrics execution time

Building strong data foundations and healthier data cultures

WellStack helps healthcare organizations democratize data and accelerate analytics to achieve better outcomes. These organizations — which represent over 75% of Wisconsin's physicians — rely on WellStack's low-code/no-code solutions to integrate and centralize large amounts of healthcare data, streamline reporting and increase data science.

WellStack's healthcare data analytics platform, Powered by Snowflake, ingests and combines over 10 years of historical clinical data from more than 500 provider organizations with varying data standards, types and formats. With easy access to this information through WellStack, healthcare organizations now have an out-of-the-box data ecosystem to support data-first decision-making. Snowflake's near-unlimited scale, concurrency and performance are central to WellStack's strategy of building robust data foundations for its clients, which include 35 health systems, 325 medical clinics and more than 150 dentists.

Story Highlights

Modern healthcare data analytics platform

WellStack's platform, Powered by Snowflake, helps clients gain a deeper understanding of patients and patient populations to support better decision-making.

Democratized access to longitudinal data

WellStack's longitudinal semantic layer is made available through a **unified data model** in Snowflake, which democratizes data access with less technical complexity.

Reliable healthcare data and insights

WellStack helped Wisconsin Health Collaborative for Healthcare Quality process over **200 billion** patient records from over **35 data** sources -cutting data source onboarding timelines by **80%** while delivering more than **135** HEDIS-like care **quality measures** in 12 months.

Overcoming data complexity to unlock healthcare insights

Today's healthcare organizations depend on timely, accurate data for point-of-care analytics, operational and executive reporting and regulatory compliance. While the industry's shift toward value-based care underscores the growing need for analytics, overcoming data complexity in healthcare isn't easy — especially for organizations with inadequate data engineering expertise.

Seeking to simplify its data management, WellStack began developing a platform for integrating and standardizing a wide variety of healthcare data, including clinical, claims and operational data. WellStack's original architecture relied on traditional SQL database technology, which made it difficult to realize the team's vision of building a multi-tenant product. Sharing data mart access with clients was time-consuming and posed potential security risks, while performance issues led to reporting delays.

Needing a secure, modern data environment that could provide a single, seamless experience across multiple public clouds, WellStack chose Snowflake to power its platform.

Informing healthcare decisions with curated, longitudinal data

Successfully migrating to Snowflake laid the groundwork for a scalable architecture that helps WellStack clients decrease their total cost of ownership by an average of 40%.

Prebuilt data pipelines use metadata in Snowflake to efficiently ingest data from a client's electronic medical record (EMR) system, customer relationship management (CRM) software and other data sources. WellStack's platform normalizes the data and creates a longitudinal semantic layer that's made available through a unified data model in the Data Cloud. Centralizing data in Snowflake provides clients with flexibility to use their preferred BI or data science tools, including one of WellStack's proprietary solutions. Today, WellStack's platform contains over **650 billion records** and **600 TBs of data** in Snowflake.

Clients, such as the Wisconsin Health Information Organization (WHIO), use WellStack's platform to understand patients and patient populations. These insights ultimately inform decisions that impact patient engagement, personalized care, care coordination, risk stratification, quality measurement, operational efficiency and cost control. Ease of access to reliable data empowers clinical informaticists and scientific teams to extract meaningful insights — instead of troubleshooting data quality or technical issues.

“Factors contributing to the partnership with WellStack included the company’s ability to quickly ingest, integrate and analyze clinical and claims data from multiple sources, the speed at which they can return analytics for WHIO’s customers and WellStack’s dedication to being a true partner.”

— Dana Richardson, CEO, Wisconsin Health Information Organization

Reimagining a complex data ecosystem that represents 4.5 million unique patients

Snowflake’s elastic performance engine scales to support virtually any number of users, data or jobs, which bolsters WellStack’s responsiveness to its clients’ expansive data needs.

For example, the Data Cloud played a pivotal role in WellStack’s successful engagement with the Wisconsin Health Collaborative for Healthcare Quality (WCHQ), an organization whose members represent more than 65% of Wisconsin’s primary care physicians. Previously, WCHQ experienced data processing delays, data quality issues and technical challenges that inhibited grant participation and growth opportunities.

Implementing WellStack’s platform, Powered by Snowflake, helped WCHQ centralize over 100 TB of data from approximately **35 EMR instances**, process over **200 billion patient records**, **reduce** data source onboarding **timelines** by **80%** and **deliver more than 135 quality measures**.

“WellStack is innovative, collaborative and more of a partner than a vendor. Our needs are exceptionally unique, and they have diligently worked to provide a customized and continually improving solution. WellStack’s data platform with Snowflake is 25x faster than the prior solution.”

— Gabrielle Rude, PhD, President and CEO, Wisconsin Health Collaborative for Healthcare Quality

Today, WCHQ’s revamped data ecosystem provides 150 healthcare organizations with diverse longitudinal clinical data for improving quality and care outcomes. For example, a Wisconsin CMS-certified organization uses this data to deliver the Qualified Entity Program for Wisconsin’s Fee-for-Service program. Leveraging curated longitudinal data enables WCHQ to provide reports and performance measurements that help drive insights that improve quality and affordability of healthcare in Wisconsin.

Exploring AI opportunities and optimizing machine learning workloads with Snowflake

Moving forward, the Data Cloud will play an important role in WellStack’s ability to support effective AI strategies. Snowpark ML could also streamline WellStack’s predictive use cases involving diagnoses, appointment no-shows and value of care.